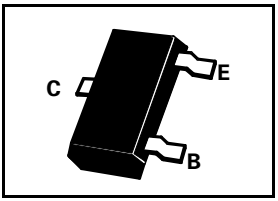
SOT23 PNP SILICON PLANAR HIGH GAIN MEDIUM POWER TRANSISTOR

FMMTL717

ISSUE 1 – DECEMBER 1997

FEATURES

Very low equivalent on-resistance; $\mathbf{R_{CE(sat)}}$=160mΩ at 1.25A



COMPLEMENTARY TYPE – FMMTL617

PARTMARKING DETAIL – L77

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-12	V
Collector-Emitter Voltage	V_{CEO}	-12	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-1.25	A
Peak Pulse Current	I_{CM}	-4	A
Base Current	I_B	-200	mA
Power Dissipation at T_{amb}=25°C	P_{tot}	-500	mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

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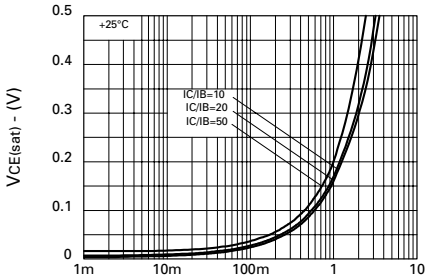
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C).

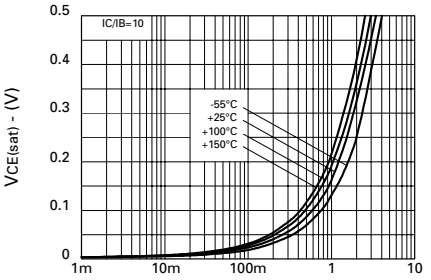
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-12	-35		V	I_C=-100μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-12	-25		V	I_C=-10mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-8.5		V	I_E=-100μA
Collector Cut-Off Current	I_{CBO}			-10	nA	V_{CB}=-10V
Emitter Cut-Off Current	I_{EBO}			-10	nA	V_{EB}=-4V
Collector Cut-Off Current	I_{CES}			-10	nA	V_{CE}=-10V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-24 -94 -160 -200	-40 -140 -240 -290	mV mV mV mV	I_C=-100mA, I_B=-10mA* I_C=-500mA, I_B=-20mA* I_C=-1A, I_B=-50mA* I_C=-1.25A,I_B=-50mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-970	-1100	mV	I_C=-1.25A, I_B=-50mA*
Base-Emitter Turn On Voltage	$V_{BE(on)}$		-875	-1000	mV	I_C=-1.25A, V_{CE}=-2V*
Static Forward Current Transfer Ratio	h_{FE}	300 300 180 100 50	490 450 275 180 110			I_C=-10mA, V_{CE}=-2V I_C=-100mA, V_{CE}=-2V* I_C=-1A, V_{CE}=-2V* I_C=-2A, V_{CE}=-2V* I_C=-3A, V_{CE}=-2V*
Transition Frequency	f_T		205		MHz	I_C=-50mA, V_{CE}=-10V f=100MHz
Collector-Base Breakdown Voltage	C_{obo}		15	20	pF	V_{CB}=-10V, f=1MHz
Switching times	t_{on} t_{off}		76 149		ns ns	I_C=-1A, V_{CC}=-10V I_{B1}=I_{B2}=-10mA

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%

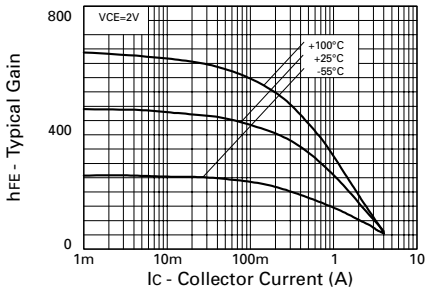
TYPICAL CHARACTERISTICS



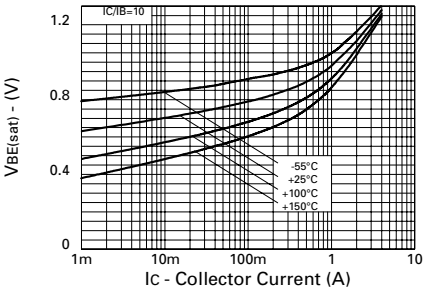
VCE(sat) v IC



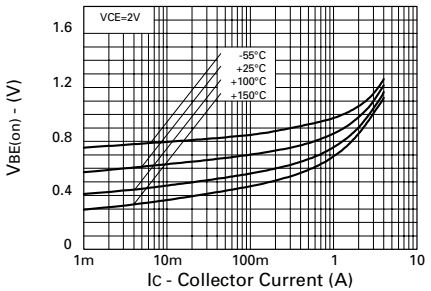
VCE(sat) v IC



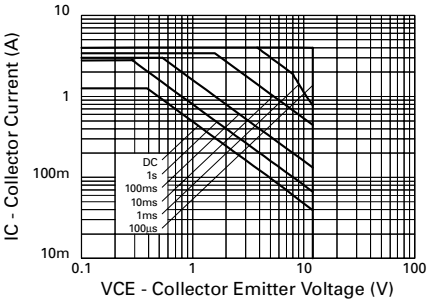
hFE v IC



VBE(sat) v IC



VBE(on) v IC



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